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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,071	10/18/2001	Luca Blessent	020005	3899

23696 7590 09/20/2005

Qualcomm, NC
5775 Morehouse Drive
San Diego, CA 92121

EXAMINER	
DAVIS, CYNTHIA L	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/042,071	BLESSENT, LUCA	
	Examiner	Art Unit	
	Cynthia L. Davis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *21-29* is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/8/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-2, 4-5, 11-12, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Vanghi.

Regarding claim 1, determining an expected target frame error rate (FER); and adjusting the expected target FER on the basis of the determined expected target FER is disclosed as prior art in paragraphs 8 and 9 of applicant's disclosure (disclosing raising or lowering the power control setpoint to achieve a desired FER). Determining a compensation factor on the basis of a known non-zero $P(D \mid E)$ value, and adjusting the target FER based on and the compensation factor is missing from the admitted prior art. However, Vanghi discloses in column 2, lines 24-31, adjusting up the target SNR as frame erasures are detected. It would have been obvious to one skilled in the art at the time of the invention to take frame erasure detection into account in the admitted prior art method of power control. The motivation would be to use a conventional closed loop power control system (Vanghi, column 2, lines 4-6).

Regarding claim 11, means for determining an expected target frame error rate (FER); and means for adjusting the expected target FER on the basis of the determined expected target FER is disclosed as prior art in paragraphs 8 and 9 of applicant's

disclosure (disclosing raising or lowering the power control setpoint to achieve a desired FER). Means for determining a compensation factor on the basis of a known non-zero P(D | E) value, and means for adjusting the target FER based on and the compensation factor is missing from the admitted prior art. However, Vanghi discloses in column 2, lines 24-31, adjusting up the target SNR as frame erasures are detected. It would have been obvious to one skilled in the art at the time of the invention to take frame erasure detection into account in the admitted prior art method of power control. The motivation would be to use a conventional closed loop power control system (Vanghi, column 2, lines 4-6).

Regarding claims 2 and 12, the outer loop power control is reverse outer loop power control is disclosed in applicant's admitted prior art in paragraph 9 of the specification.

Regarding claims 4 and 14, the known non-zero P(D | E) is dynamically determined is missing from the admitted prior art. However, Vanghi discloses in column 2, lines 20-30, that the metric N that indicated the detection of frame errors in the system is calculated dynamically. It would have been obvious to one skilled in the art at the time of the invention to dynamically determine the frame error detection factor. The motivation would be to have the factor reflect the current state of the system.

Regarding claims 5 and 15, the communication device is a CDMA base station, base station controller, or mobile station is disclosed in applicant's admitted prior art in paragraph 7 of the specification.

2. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Vanghi in further view of Love.

Regarding claims 3 and 13, the known non-zero $P(D|E)$ is a constant value is missing from the admitted prior art. However, Love discloses in column 6, lines 23-34, mapping specific transmission rates to specific probabilities of frame erasure. It would have been obvious to one skilled in the art at the time of the invention to have the probability of detection of a frame erasure be a constant. The motivation would be to be able to use known mappings of probability to transmission rate such as are disclosed in Love, obviating the need to calculate the probability, which would add complexity to the system.

3. Claims 6-7 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Vanghi in further view of Dominique.

Regarding claims 6 and 16, the adjusting occurs during non-DTX occurrences is missing from the admitted prior art. However, Dominique discloses in column 3, lines 41-43, that power control is typically suspended during DTX mode in a prior art communications system. It would have been obvious to one skilled in the art at the time of the invention to adjust while in non-DTX mode. The motivation would be to adjust only while power control was being carried out.

Regarding claims 7 and 17, detecting consecutive DTX occurrences; and in response to the detection of consecutive DTX occurrences, lowering a power control setpoint associated with the outer loop power control is missing from the admitted prior art. However, Dominique discloses in column 1, lines 50-57, a power threshold for

normal communications, and in column 2, lines 18-24 and 30-34, another, lower threshold for DTX mode. It would have been obvious to one skilled in the art at the time of the invention to lower the power threshold during DTX mode which is when DTX occurrences would be occurring consecutively. The motivation would be to have the threshold correspond to the fact that DTX is a low-power mode (Dominique, column 3, lines 18-24).

4. Claims 8-10 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dominique.

Regarding claim 8, a wireless communication device having DTX detection and a method of providing outer loop power control is disclosed in Dominique, column 3, lines 30-33, and column 2, lines 57-58. Detecting consecutive DTX occurrences; and in response to the detection of consecutive DTX occurrences, lowering a power control setpoint associated with the outer loop power control is not specifically disclosed in Dominique. However, Dominique does disclose in column 1, lines 50-57, a power threshold for normal communications, and in column 2, lines 18-24 and 30-34, another, lower threshold for DTX mode. It would have been obvious to one skilled in the art at the time of the invention to lower the power threshold during DTX mode, which is when DTX occurrences would be occurring consecutively. The motivation would be to have the threshold correspond to the fact that DTX is a low-power mode (Dominique, column 3, lines 18-24).

Regarding claim 18, a wireless communication device having DTX detection and a method of providing outer loop power control is disclosed in Dominique, column 3,

lines 30-33, and column 2, lines 57-58. Means for detecting consecutive DTX occurrences; and in response to the detection of consecutive DTX occurrences, means for lowering a power control setpoint associated with the outer loop power control is not specifically disclosed in Dominique. However, Dominique does disclose in column 1, lines 50-57, a power threshold for normal communications, and in column 2, lines 18-24 and 30-34, another, lower threshold for DTX mode. It would have been obvious to one skilled in the art at the time of the invention to lower the power threshold during DTX mode, which is when DTX occurrences would be occurring consecutively. The motivation would be to have the threshold correspond to the fact that DTX is a low-power mode (Dominique, column 3, lines 18-24).

Regarding claims 9 and 19, the outer loop power control is reverse outer loop power control is disclosed in Dominique, column 1, lines 57-58.

Regarding claims 10 and 20, the wireless communication device is one of a CDMA base station, base station controller, or mobile station is disclosed in Dominique, column 1, line 46-47.

Allowable Subject Matter

5. Claims 21-29 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L. Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLD
9/15/2005 CLD 9/15/05

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600